

The logo features a stylized 'LS' monogram on the left, with the 'L' in dark blue and the 'S' in red. To the right, the words 'LIGHT' and 'SPEED' are stacked vertically in a bold, grey, sans-serif font.

**LS LIGHT SPEED**

The background of the image shows a white surface with two black carbon fiber tubes. One tube runs diagonally from the bottom left towards the top right, while another tube runs vertically on the right side. The tubes are connected at a joint.

CARBON FIBER RIGGING

HIGH-TECH  
RIGGING IS  
NO LONGER  
RESERVED  
FOR THE  
PROS

# MYTHS ABOUT CARBON FIBER RIGGING

## ~~FRAGILE~~

LS Carbon is sleek AND sturdy – constructed with an integral Technora blend and flexible resin for optimal chafe and impact resistance.

## ~~EXPENSIVE~~

Over double the lifespan of rod or PBO, but priced in line, LS Carbon provides the best performance and financial value.

## ~~COMPLEX~~

All LS Carbon rigging solutions are easily retrofittable.  
LS Carbon is designed to be manageable: easy to install and maintain.



# The Case for Carbon Rigging

High-tech materials are no longer reserved for Pro teams.

All sailors can benefit from the weight-savings, righting-moment, and performance of solid carbon rigging – while enjoying the durability and reliability of composite materials.

INVEST IN RIGGING THAT LASTS AS LONG AS YOUR MAST.



## **WEIGHT SAVINGS**

Average 75% weight savings from metal rigging alternatives



## **RIGHTING MOMENT**

Less weight aloft means more righting moment from your keel



## **DURABILITY**

Lasts 3x longer than metal rigging. No corrosion, fatigue or degradation



## **LOWEST STRETCH**

Best stiffness (EA) for rigging cable's size and weight compared to alternatives



## **DIMENSIONAL STABILITY**

Unlike textiles, carbon has no stretch or movement by environmental factor

SOLID CARBON,  
COILABLE  
CABLE

RUGGED,  
OFFSHORE  
CAPABLE

IMPACT & CHAFE  
RESISTANT

<80 FT  
VESSELS

FORE/AFT  
& SIDE RIGGING

# LS Carbon

LS Carbon is our principal line of carbon fiber rigging. Manufactured out of T-700 carbon fiber, and innovatively wound for strength paired with flexibility. LS Carbon cables are shock-resistant, bare, and homogenous coilable carbon that can be used, abused, and maintained by any owner: inshore or offshore, cruisers or racers.

**LS Carbon cable technical data**

Cable Diameter mm	EA Value kN kN	Break Load Kg	Work Load Limit Kg	Cable Weight Kg/m
3.5mm	1,129	1,484	515	0.0408
4mm	1,474	1,696	675	0.0516
5mm	2,303	2,756	1050	0.0564
6mm	3,316	3,604	1515	0.0648
7mm	4,513	4,664	1925	0.0756
8mm	5,895	6,360	2520	0.0960
10mm	9,211	9,540	3935	0.1260
12mm	13,263	12,296	5300	0.1560
14mm	18,052	16,324	7087	0.1944
16mm	23,578	20,988	9229	0.2364
19mm	33,249	25,228	11876	0.3000
22mm	44,577	35,828	15240	0.4200
25mm	57,563	47,700	21203	0.5640

**LS Carbon** is appropriate for side and fore/aft rigging. LS Carbon is flexible enough for deflection, but dimensionally stable enough to outperform textiles. With under 2% stretch, LS Carbon outlasts PBO and dyneema. Our eye terminations are customized to whatever pin size or lashing you need, all finished with titanium rings and our LS signature on matte carbon.



**LS Carbon**  
Fore/Aft Rigging

FORESTAYS,  
CHECKSTAYS,  
BACKSTAYS

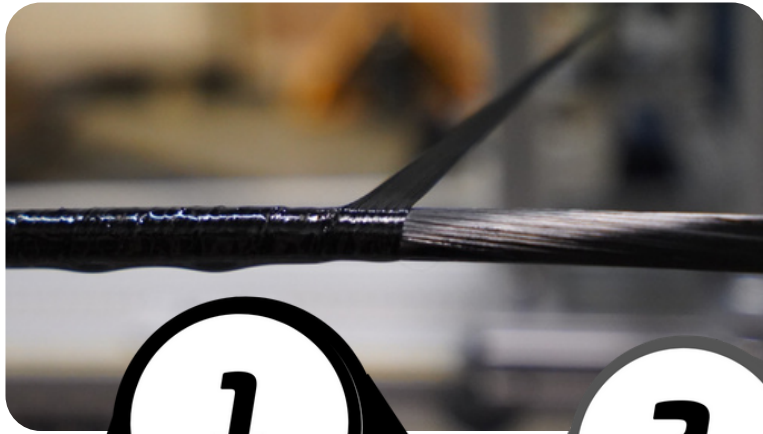
CUSTOM  
LASHING OR  
PIN EYE  
TERMINATIONS

TITANIUM AND  
CARBON  
FINISHINGS

INTEGRAL  
TECHNORA®  
COVER

DIMENSIONALLY  
STABLE,  
< 2% STRETCH

LS Carbon is constructed more like a rope, using a single filament of carbon fiber wound continuously, which is then sealed with an integral Technora hoop-wound cover and LS Resin. Our innovative cable construction allows for uniform load paths, and flexibility that will not jeopardize the structural properties of the carbon cable.



**1**

**RAW  
CARBON  
FIBER**

*Build process begins with a spool of raw T-700 Toray carbon fiber.*

**2**

**SLING  
WIND**

*Singular carbon fiber thread is wound continuously between two horizontal spindles the length of the cable.*

**3**

**HOOP  
WIND**

*Technora fiber blend is hoop-wound around cable diameter to compress and protect cable's carbon fibers.*

**4**

**LS  
RESIN**

*Proprietary UV stable and flexible LS Resin is applied to seal cable.*

**5**

**CURE  
& SHIP**

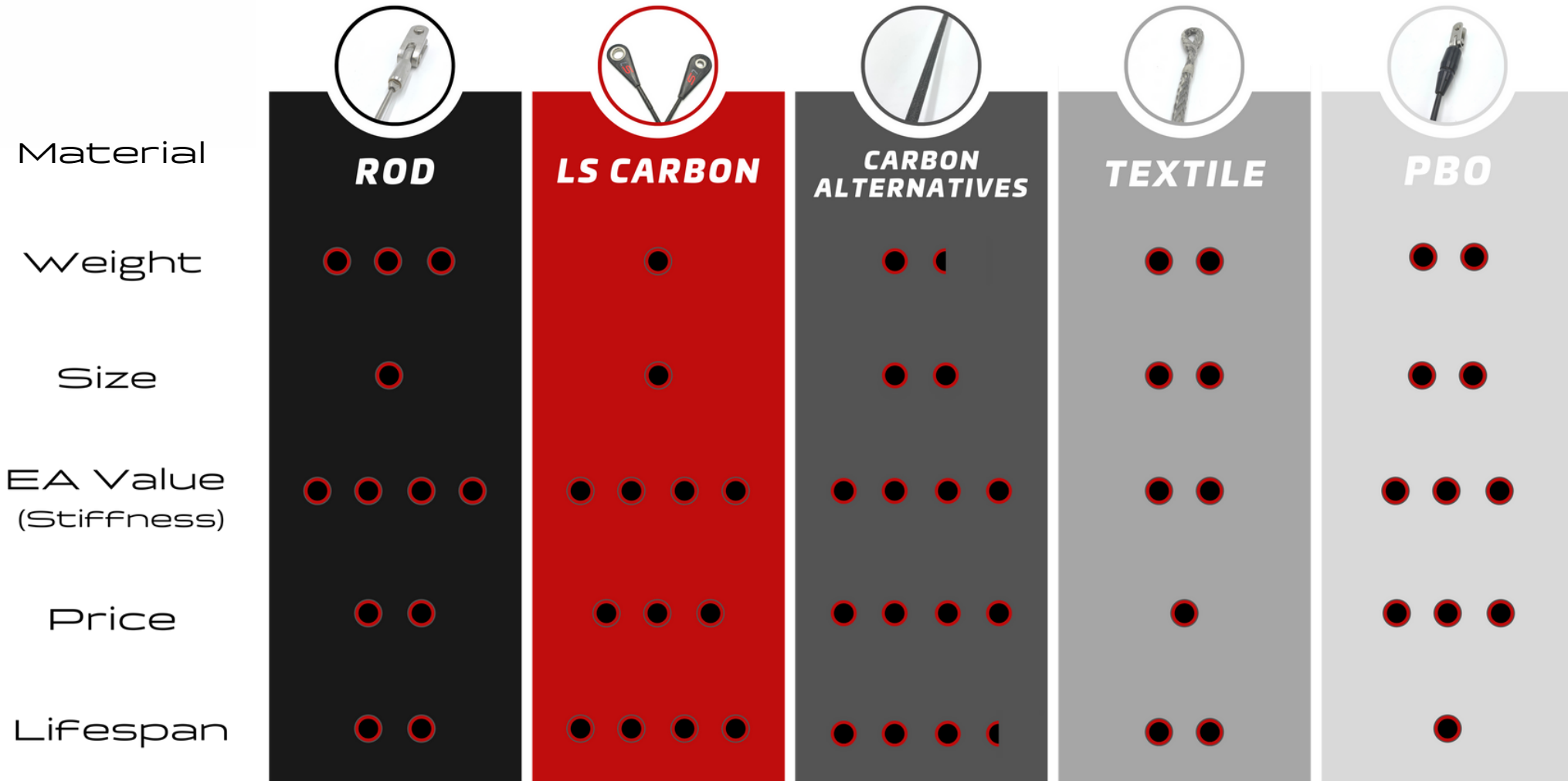
*Electrical current completes the in-house curing process. Cable is finished, coiled, and shipped -- ready to **plug-and-play!***

# YACHT RIGGING OPTIONS

When stacked up against the competition, LS Carbon wins.

Value is determined by the investment over its lifespan, and Light Speed offers the best performance rigging value.

LS Carbon packs the highest performance in the smallest size-weight ratio, while being the most affordable carbon rigging option on the market.



# The **LS LIGHT SPEED** Difference

## T-700 & T-800 CARBON FIBER

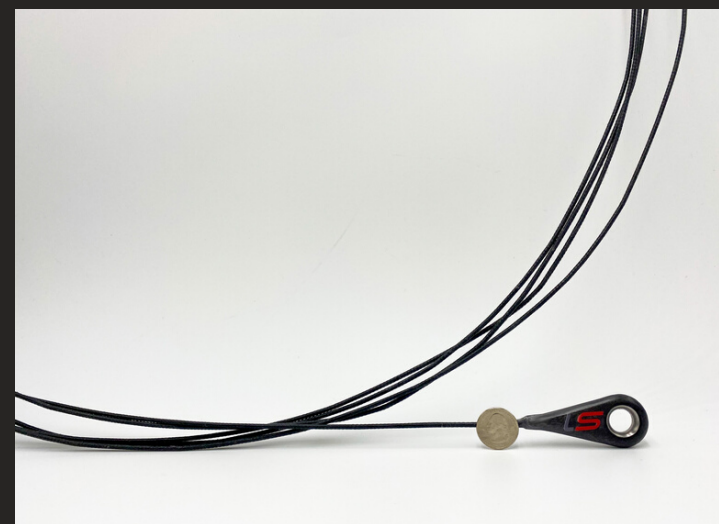
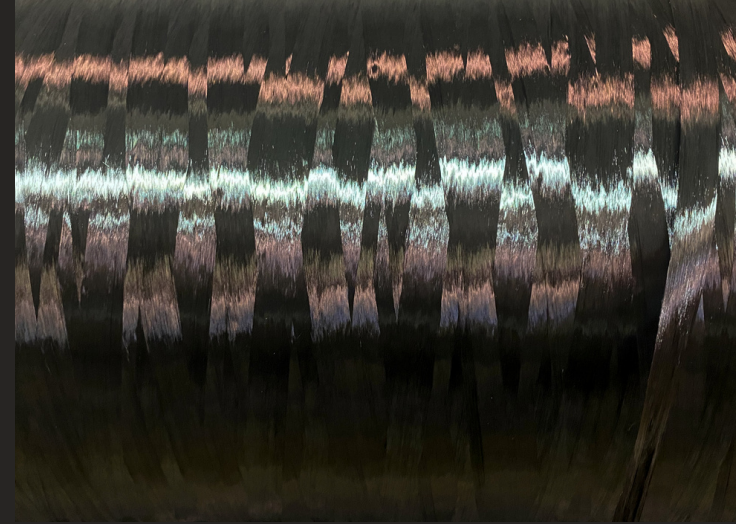
Our raw materials come from industry-leader Toray. The T-700/800 are intermediate grade carbon fibers, providing the best combination of tensile strength and durability for the task.

## TITANIUM & STAINLESS TERMINATIONS

Our Titanium terminals are a high-grade structural alloy that is light-weight, but strong. LS also uses 17-4 Stainless Steel that avoids galvanic corrosion issues with carbon, and won't gore.

## PROPRIETARY RESIN & PROCESS

LS Resin is a proprietary UV-stable resin that seals the carbon fibers, but still allows flexibility of the cable. Electrical currents are sent through the cable during our in-house curing process; cables are then coiled and shipped -- ready to plug and play! This unique finishing feature allows LS Carbon to be shipped and stored anywhere in the world.





LS Carbon Pro is our most advanced line of carbon fiber rigging. LS Carbon Pro has all of the high-end performance features that Pro teams need, but at a fraction of the cost of competitors. Built with an aerodynamic profile for the lowest drag, LS Carbon Pro has the lightest weight and lowest stretch coefficient. The rigid carbon cables are still coilable and shippable, but appropriate for side rigging and professionally maintained programs only.

# LS Carbon Pro



**LS Carbon Pro cable technical data**

Cable Diameter mm	EA Value kN kN	Break Load Kg	Work Load Limit Kg	Cable Weight Kg/m
3.5mm	1,389	1,721	597	0.0376
4mm	1,814	1,967	783	0.0476
5mm	2,834	3,197	1218	0.0520
6mm	4,081	4,181	1757	0.0597
7mm	5,555	5,410	2233	0.0697
8mm	7,255	7,378	2923	0.0885
10mm	11,336	11,066	4565	0.1161
12mm	16,323	14,263	6148	0.1438
14mm	22,218	18,936	8221	0.1792
16mm	29,019	24,346	10705	0.2179
19mm	40,921	29,264	13776	0.2765
22mm	54,864	41,560	17678	0.3871
25mm	70,847	55,332	24595	0.5198

RIGID, SOLID  
CARBON  
RIGGING

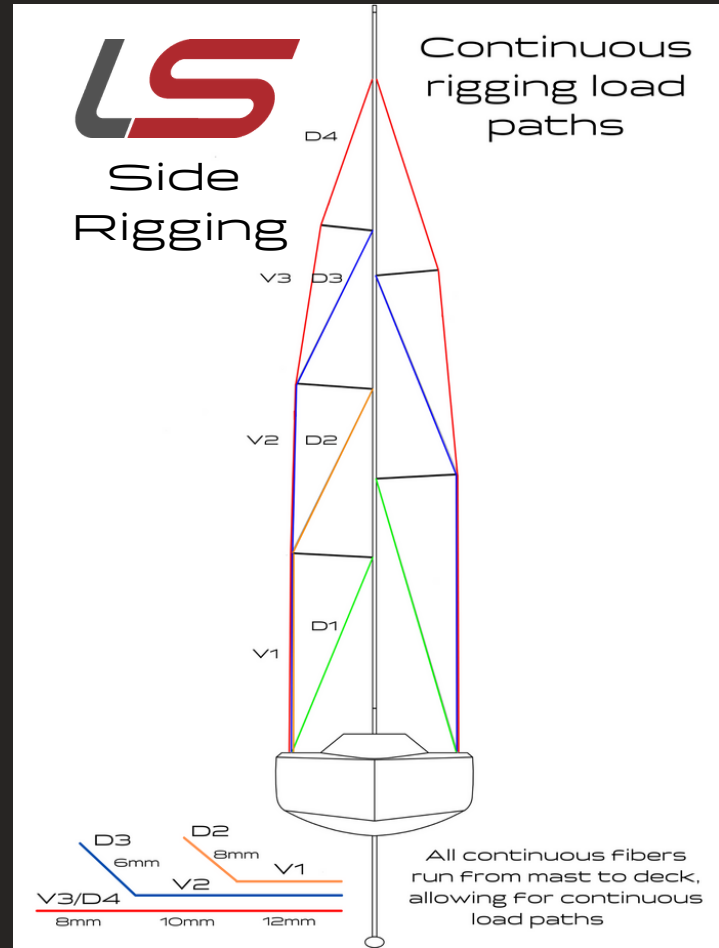
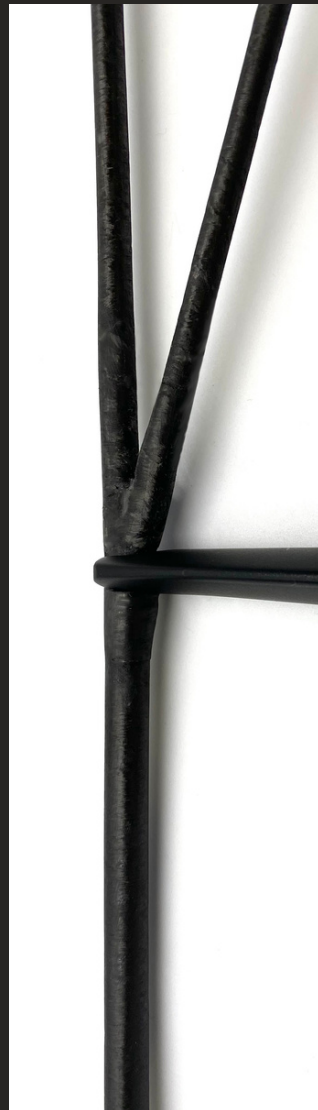
LIGHTEST  
WEIGHT

LOWEST  
STRETCH  
COEFFICIENT

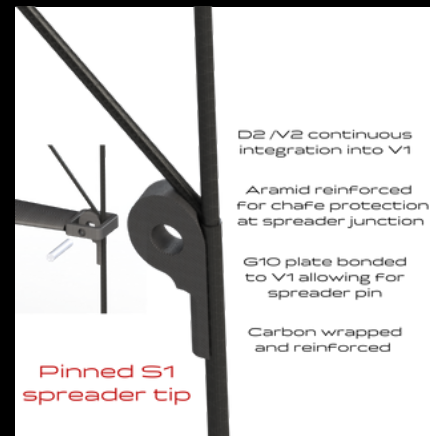
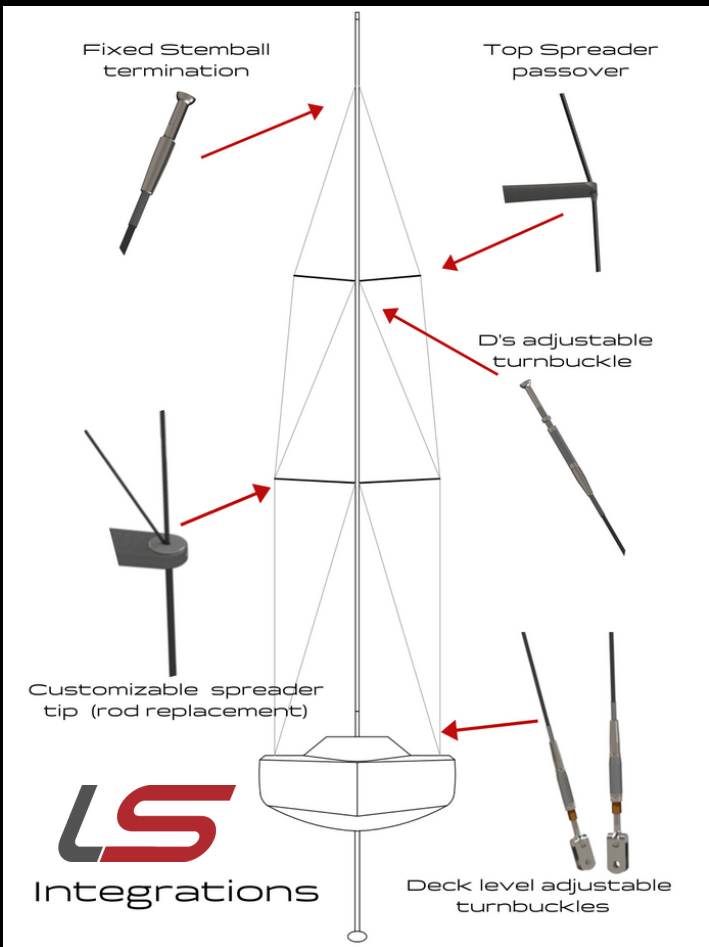
AERODYNAMIC  
PROFILE

PRO TEAMS  
<80 FT  
VESSELS

SIDE RIGGING



CONTINUOUS,  
SOLID CARBON  
RIGGING CABLES



SEAMLESS  
RETROFITS &  
INTEGRATIONS



# LS TORQ

LS TORQ is an application of our LS Carbon cable, optimized for structural torsion cables.

The inner core of the cable is a unidirectional single filament wound continuously, which provides for uniform load transfer. The outer core is a reverse helix of +/- 30 degrees, an angle that most efficiently transmits torque loads along the cable length.

Our unique build process allows for a strong structural torsion cable that is flexible, which can be flaked and stored along with the sail. LS TORQ can be customized to fit any furler set up for forestay and inner forestay applications on vessels up to 80 ft.



# CASE STUDY

POGO 12.50  
HERMES

CLASS 40 CRUISER

**20%** MORE THAN COST OF  
ROD RETROFIT, OVER  
DOUBLE THE LIFESPAN

**75%**

RIGGING WEIGHT  
REDUCTION FROM  
WIRE TO LS CARBON

**↑** INCREASE IN RIGHTING  
MOMENT, EQUIVALENT  
TO ADDING 200 LBS TO  
THE KEEL

**0%** CHANGE IN IRC RATING  
SWITCHING TO CARBON

**“Hermes handles noticeably better, especially in heavy conditions. The boat responds and recovers faster, and can hold sails up at least a knot higher.”**  
- Meg Reilly, co-skipper Hermes.

HERMES, Pogo 12.50, upgraded from compact dyform wire side rigging to LS Carbon in December 2020. The boat is run by offshore racing and training program, Ocean Racers, and the team was looking for an affordable performance rigging solution that could withstand their demanding race seasons.

LS Carbon was quoted at just 20% more than a rod rigging retrofit package for Hermes, but is over double the lifespan, making it a smart investment choice. Durability was one of the team's primary concerns, as they log near 10,000 NM offshore in normal years.

Ocean Racers first installed LS Carbon as their removable inner forestay with a hanked staysail. After a trip to Bermuda and back, the team was very pleased with the performance of LS Carbon and went on to install LS Carbon side rigging.

In switching to LS Carbon, Hermes dropped 55-lbs in standing rigging weight, which is the equivalent of adding a near 200-lbs to the keel! This boosted Hermes' ORC stability score by several points, yet barely affected the overall handicap rating. In IRC, the vessel's rating remained at 1.177 from 2020 to 2021 (officially endorsed), despite the switch to carbon rigging.

To date of publishing, the team has logged over 3,000 NM offshore with their new LS Carbon rigging, at times in extreme Gulf Stream conditions.



## **OUR MISSION**

To provide high-tech rigging solutions that are accessible, built to purpose, safe, reliable and manageable for all.



FULLY CUSTOMIZABLE, CONTINUOUS OR DISCONTINUOUS,  
BARE OR SLEEVED, EASY TO RETROFIT OR CUSTOM NEW BUILD

Contact [Mike@lightspeedrigging.com](mailto:Mike@lightspeedrigging.com)  
for a custom quote.

**LS** LIGHT  
SPEED

@LIGHTSPEEDRIGGING



[www.lightspeedrigging.com](http://www.lightspeedrigging.com)

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